We claim:

1. An affinity binding composition comprising;

a first and second solid phase matrix contacting each other;

a first receptor immobilized on said first solid phase matrix, capable of specific binding to a first ligand but not a second ligand; and

a second receptor immobilized on said second solid phase matrix, capable of specific binding to the second ligand but not the first ligand.

2. The affinity binding composition of claim 1 further comprising;

a third receptor immobilized on a third solid phase matrix, capable of specific binding to a third ligand but not the first ligand or the second ligand.

3. The affinity binding composition of claim 2 further comprising;

a fourth receptor immobilized on a fourth solid phase matrix, capable of specific binding to a fourth ligand but not the first ligand, the second ligand or the third ligand.

4. The affinity binding composition of claim 3 further comprising;

a fifth receptor immobilized on a fifth solid phase matrix, capable of specific binding to a fifth ligand but not the first ligand, the second ligand, the third ligand or the fourth ligand.

5. The affinity binding composition of claim 1 wherein the ligands are proteins.

6. The affinity binding composition of claim 1 wherein the receptors are antibodies.

7. The affinity binding composition of claim 1 wherein the matrixes are porous.

8. An affinity column comprising; a chamber having a fluid inlet and a fluid outlet and within the chamber the affinity binding composition of claim 1 such that fluid flowing from the inlet to the outlet passes by or through the affinity binding composition.

9. An affinity column comprising; a chamber having a fluid inlet and a fluid outlet and within the chamber the affinity binding composition of claim 2 such that fluid flowing from the inlet to the outlet passes by or through the affinity binding composition.

10. An affinity column comprising; a chamber having a fluid inlet and a fluid outlet and within the chamber the affinity binding composition of claim 6 such that fluid flowing from the inlet to the outlet passes by or through the affinity binding composition.

11. An affinity column of claim 10 wherein at least one solid phase matrix having a receptor is selectively removable from at least one other solid phase matrix having a different receptor.

12. An affinity column comprising; a chamber having a fluid inlet and a fluid outlet and within the chamber the affinity binding composition of claim 7 such that fluid flowing from the inlet to the outlet passes by or through the affinity binding composition.

13. An apparatus for affinity separation comprising;

a first affinity column having a first fluid inlet, a first fluid outlet and a chamber containing a first receptor immobilized on a first solid phase matrix, capable of specific binding to a first ligand but not a second ligand,

a second affinity column having a second fluid inlet, a second fluid outlet and a chamber containing a second receptor immobilized on a second solid phase matrix, capable of specific binding to a second ligand but not a first ligand, and

a conduit connecting the outlet from the first fluid outlet to the second fluid inlet

14. A method for preparing a receptor matrix comprising;

contacting a receptor containing liquid with a ligand,

separating the receptor bound to the ligand from other components in the receptor containing liquid,

eluting the receptor from being bound to the ligand to produce purified receptor, and

immobilizing the purified receptor on a matrix to form the receptor matrix

15. The method of claim 14 further comprising;

neutralizing or removing a reagent that contributed to said eluting before immobilizing the purified receptor, or both, or altering a physical condition.

16. The method of claim 15 wherein the reagent is removed by desalting.

17. The method of claim 14 wherein the ligand is immobilized.

18. The method of claim 14 further comprising repeating the method with a second receptor and a second ligand to prepare a second receptor matrix.

19. The method of claim 18 further comprising mixing the receptor matrix with the second receptor matrix.

20. The method of claim 18 further comprising repeating the method with a third receptor and a third ligand to prepare a third receptor matrix.

21. The method of claim 14 wherein the receptor is an antibody and the ligand is a protein.

22. An apparatus for preparing a receptor matrix comprising;

a first column having a fluid inlet, a fluid outlet and containing an immobilized ligand;

a second column having a fluid inlet, a fluid outlet and containing matrix for immobilizing receptor; and

a fluid connection between the outlet of the first column and the inlet of the second column.

23. The apparatus of claim 22 further comprising;

an intermediate column having a fluid inlet, a fluid outlet and containing a neutralizer or remover of a reagent or conditions causing dissociation of receptor-ligand binding;

wherein the first column fluid outlet has a fluid connection to the inlet of the intermediate column and the outlet of the intermediate column has a fluid connection to the inlet of the second column.

24. A method for preparing a receptor matrix comprising;

mixing a first receptor matrix with a second receptor matrix,

wherein the first receptor binds a different ligand from the second receptor.

25. A method for forming a covalent bond between two proteins comprising; reacting a plurality of chemically different crosslinking agents simultaneous with both proteins,

wherein both crosslinking agents by themselves alone are capable of forming covalent bond between the two proteins.

26. The method of claim 25 wherein the two proteins are bound to each other by non-covalent bonds before reacting with the crosslinking agents.

27. A method for separating ligands from a sample for analysis of remaining ligands comprising;

removing at least two specific predefined ligands from the sample, and

analyzing the remaining ligands in the sample.

28. The method of claim 27 wherein at least three ligands are removed.

29. The method of claim 28 wherein at least four ligands are removed.

30. The method of claim 27 wherein the ligands are proteins.

31. The method of claim 27 wherein the ligands are removed by binding to specific predefined receptors wherein the receptors are in insoluble form or is insolubilized after binding to the ligands

32. The method of claim 27 wherein at least 50% by weight of all ligands in the sample are removed.

33. The method of claim 32 wherein at least 75% by weight of all ligands in the sample are removed.

34. The method of claim 31 further comprising, removing the bound ligands from the receptors.

35. The method of claim 33 further comprising, repeating the process by reusing the receptors with a new sample.

36. The method of claim 34 wherein the process is repeated 20 times with the same receptors.

37. The method of claim 35 wherein the process is repeated 50 times with the same receptors.

38. The method of claim 36 wherein the process is repeated 200 times with the same receptors.

39. The method of claim 27 wherein the remaining ligands are analyzed by separation and quantification of the remaining ligands.

40. The method of claim 31 wherein at least one immobilized receptor is selectively removable from at least one other immobilized receptor.

41. The method of claim 31 wherein one division of receptor is selectively removable from another division of receptor.

42. The method of claim 31 wherein at least two division of receptors are immobilized in at least two predefined locations,

wherein at least one receptor is located in a different predefined location from another receptor, and

wherein the sample is sequentially passed through both predefined locations.

43. A two dimensional electrophoresis gel comprising isolated proteins from a protein containing sample, wherein at least two predetermined proteins are substantially not present in the gel, wherein the protein containing sample contained said predetermined proteins and other proteins in said sample are present in the two-dimensional electrophoresis gel.

44. The modified ligand-containing sample produced by the process of claim 27 .